

# THE FIRST STATE WATERMARK



## *Delaware's Floodplain Management Newsletter*

Volume 14, Number 1

### **LiDAR Data and Flood Hazard Management**

The Federal Emergency Management Agency is converting from the old NGVD 1929 to NAVD 88 vertical datum. The January 6, 2005 Sussex County Delaware Flood Insurance Rate Maps reference the NAVD 88 vertical datum and Kent County's maps were converted to the NAVD 88 datum in 2003. In Delaware, this change in datum is generally slightly less than one foot. For example, the 1% annual chance (100-year) flood stage for Indian River Bay changed from +7.5' NGVD 29 to +6.7' NAVD 88. This conversion does not represent an actual change in the 100-year flood stage.

#### **What is LiDAR**

LiDAR stands for Light Detection and Ranging. The United States Geological Survey defines LiDAR as: "a technology that employs an airborne scanning laser rangefinder to produce detailed and accurate topographic surveys. LIDAR can be used to accurately measure the topography of the ground, even where overlying vegetation is quite dense."

A vertical datum is a constant starting point that defines a system for comparison of elevations. In the NFIP, a vertical datum is important because all elevations need to be referenced to the same system. Otherwise, surveys using different datums would have different elevations for the same point. Historically, the FIRMs have referenced the National Geodetic Vertical Datum of 1929 (NGVD 29). In Kent and Sussex County, a more accurate vertical datum has been used — the North American Vertical Datum of 1988 (NAVD 88).

#### **Why is the Vertical Datum Changing?**

A datum needs to be updated periodically because of land subsidence, uplift or gradual changes in sea level. In addition, the older vertical datum (NGVD 29) made erroneous assumptions that mean sea level at different tidal stations represented the same elevation (zero). With the outdated vertical datum,

points at 0.0' NGVD 29 had, in fact, different elevations for a variety of reasons.

#### **Frequently asked questions about datum changes**

**Q:** The old floodplain map showed a BFE of +6 NGVD 29 on my property while the new map shows a BFE of +5 NAVD 88. Does this mean that the flood levels have gone down?

**A:** No, the flood levels are the same depth above the ground in both the new and old datum.

**Q:** Will I need to get a new elevation certificate?

**A:** No, your old elevation certificate can be used to maintain flood insurance coverage. Since the flood maps have changed, a new elevation certificate will generally be required for future construction activities.

**Q:** Does the new datum affect building height limits?

**A:** No, the datum change is unrelated to height restrictions.

### **STATUS OF THE GLENVILLE BUY-OUT**

When Tropical Storm Henri devastated the Red Clay Creek watershed in September of 2003, the majority of residences in Glenville-Stanton Crest were severely flooded. Approximately 100 homes were declared "substantially damaged" by the New Castle County Department of Land Use. A vast majority of the homes had extensive water damage to finished basements and in some cases the next higher floor. In many cases, structural damage to the foundation had also occurred.

Many of these residents had endured severe flood damage four years earlier in Hurricane Floyd and desperately wanted out of harms way. In addition, the substantially damaged homes were prohibited from making repairs unless they were brought into compliance with New Castle County's floodplain

regulations - which would have required lifting the houses several feet.

Making matters worse, the deep and swiftly flowing water which covered subdivision streets during flood events created severe public safety concerns. As a result of Tropical Storm Henri, the Federal Emergency Management Agency (FEMA) declared New Castle County a disaster area. One of the outcomes of the disaster-recovery effort was a report from FEMA finding that in the long run it would be cost effective to purchase the most vulnerable houses at fair market value rather than continuing to repair the flood damages. There was overwhelming support in the community to participate in a buy-out.



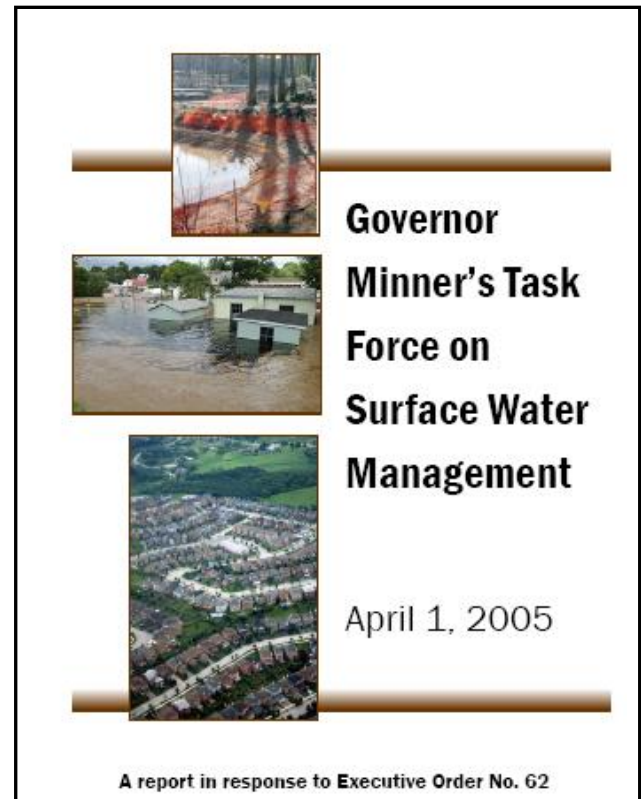
**Basement wall failure - Glenville, Delaware**

Through a partnership between New Castle County, the State of Delaware and FEMA, settlements have already been made to well over 100 of the homes in Glenville. Ultimately, these homes will be demolished and the land returned to open space.

### **GOVERNOR'S TASK FORCE ON SURFACE WATER MANAGEMENT**

In late 2004 by Executive Order, Governor Minner established a Task Force on Surface Water Management which was directed to recommend solutions for Delaware's worsening water management challenges. In April 2005, the Task Force issued its recommendations. A full copy of the Surface Water Task Force Report as well as minutes from the Surface Water Task Force meetings are available at:

<http://www.dnrec.state.de.us/dnrec2000/SWMTF>



The Task Force focused its efforts in four major areas:

- Governance – How the various levels of government involvement in drainage, flood control and stormwater management may better deliver services.
- Finance – Funding needs for planning, construction and maintenance of stormwater management and drainage projects.
- Land Use and Regulation – Opportunities to update and improve laws and regulations governing stormwater management and drainage control.
- Maintenance and Restoration – Maintaining and restoring tax ditches and stormwater facilities including opportunities for stream restoration.

### **ONLINE FLOODPLAIN RESOURCES**

Delaware has been widely recognized as the first state in the nation to have 100% digital floodplain mapping. For those of us who have gotten used to the convenience of using floodplains in the digital environment, it's hard to imagine having to rely on the paper maps but in fact many users still do!

### **LETTERS OF MAP AMENDMENT**

With the recent changes in floodplain maps in Kent and Sussex County, there is a need to access updated information about previously issued Letters of Map Amendments (LOMA). This is because when an entire county receives new floodplain maps, lenders will typically check whether properties are in the floodplain on the new maps. Property owners who were previously removed from the floodplain through a LOMA may now be required to purchase flood insurance or determine whether they are located in a floodplain. There are several factors which may help:

#### Revalidation Letters

FEMA recognizes that in many cases, properties previously issued LOMA remain outside of the floodplain on the new maps and specifically REVALIDATES the LOMA. Revalidation letters were issued for both the May 5, 2003 Kent County and January 6, 2005 Sussex County floodplain maps listing the case numbers which remain valid on the new maps.

#### New Concerns

Perhaps even more frequently, property owners who may have never been aware of their proximity to a floodplain will be notified of the need to purchase and maintain flood insurance as a condition for a mortgage. For this reason, the new Kent and Sussex County Floodplain Maps have created a demand for LOMA's even in areas where the floodplains haven't changed. For more information on LOMA/LOMR, or to download the forms, visit:

<http://www.fema.gov/fhm/>

#### Digital Floodplain Data

In many cases, a picture is worth a thousand words. To view floodplain data as an overlay over aerial photographs and with tax parcel data, visit Sussex, Kent or New Castle County's Website:

<http://map.sussexcountyde.gov/>  
[http://www.smartmap.com/kent\\_co/](http://www.smartmap.com/kent_co/)  
<http://www.co.new-castle.de.us>

Providing a lender with a printout of the floodplain data with the building in question clearly labeled may be helpful.

### **UPCOMING EDUCATIONAL OPPORTUNITIES**



- The National FloodProofing Conference will be held in Charleston, West Virginia from September 12-16, 2005. This conference is geared towards flood mitigation and property protection. For more information go to the Association of State Floodplain Managers website:

<http://www.floods.org/home/default.asp>

- The Delaware DNREC will be holding a Flood Resistant Development seminar on October 27, 2005 at Clayton Hall at the University of Delaware in Newark. The purpose of this seminar is to provide basic education about Floodplain construction requirements, using floodplain maps and flood studies, FEMA Floodplain Map Revisions and Amendments, new technologies used to study floodplains and the use of Geographic Information Systems (GIS) in floodplain management. For more information and for registration information contact Rita Baty at (302) 645-4346.

### **THE RESPONSIBILITIES FOR A COMMUNITY IN THE NATIONAL FLOOD INSURANCE PROGRAM**

Most communities in Delaware joined the National Flood Insurance Program in the 1970's in order to make flood insurance available for all residents. Communities were required to adopt floodplain regulations that meet or exceed Federal standards in order to join the NFIP. Most communities either amended existing zoning regulations to adopt the NFIP requirements or adopted a stand-alone floodplain ordinance.

Either way, it is the responsibility of EVERY community in the NFIP to actively enforce the provisions of their floodplain regulations. To fail to do so jeopardizes the availability of Federal flood insurance as well as other flood recovery assistance programs which require participation in the NFIP.

- Floodplain Development Permitting  
Every community in the NFIP must have an inspection and permitting program to monitor activity in the floodplain and ensure that construction and land-altering activities in the floodplain comply. In rare instances, small incorporated communities have entered

into agreements with County zoning agencies to enforce floodplain regulations, an acceptable alternative.

- **Basic Construction Requirements**

At the heart of every floodplain ordinance is the basic requirement that new buildings be constructed to resist flood damage. The lowest floor of residential buildings must be at or above the Base Flood Elevation and non-residential buildings must either be elevated or floodproofed. The responsibility lies with the Community to ensure that these provisions are met.

- **Floodplain Altering Activities**

Activities which can obstruct the flow of water during floods are regulated. Examples would be grading, filling, excavation, placement of culverts or other encroachments. The community **MUST** permit these activities in the floodplain and require that the permit applicant demonstrate compliance with the community's floodplain regulations.

Send mailing label and your new address, and/or

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